



DREDGING IMPLEMENTATION PLAN PRESENTATION

the CHALLENGE



The Bottom-line

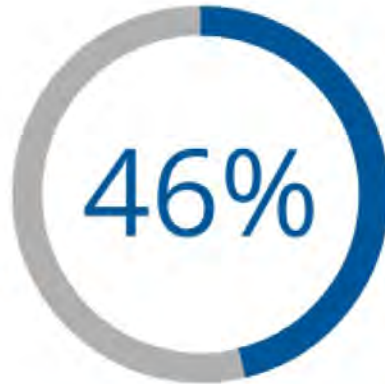
Navigable waterways in the Middle Peninsula are becoming so clogged with sediment that commercial and recreational marine traffic can no longer safely maneuver to existing piers, docks and moorings. This is having a negative effect on the region's economy and local real estate tax revenues.



the **PROBLEM**

NEED FOR A **PROACTIVE DREDGING PROGRAM**

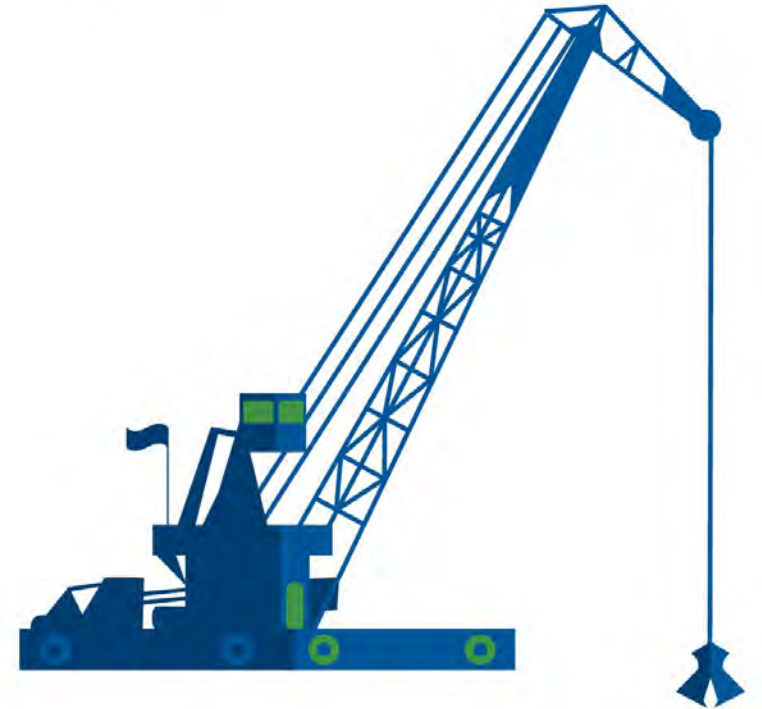
120
SHALLOW
DRAFT
CHANNELS
IN THE
REGION



55 CHANNELS
are restricted or
semi-restricted



39 CHANNELS
are completely
shoaled or shoaling
greater than 50%



SOURCE: the Virginia Institute of Marine Science's (VIMS) April 2021 report, *Dredging Implementation Prioritization and Management for Middle Peninsula Shallow Draft Channels*

the **CHALLENGE**

Why This Matters



As marine traffic leaves the Middle Peninsula - economic activities/jobs go with it.



Boating safety jeopardized.



Reduces recreational boating activity, which = reduced economy activity (locals and visitors alike, including “snowbirders”).



Reduction of shoreline property values.



Fewer real estate taxes to local governments.

the **CHALLENGE**

How We Got Here

US Army Corps of Engineers (USACE) – primary dredging funder

- 5 dredging projects - 1990-2020
- Reduction USACE funding
- Higher USACE priorities

A NEW APPROACH TO CHANNEL IS REQUIRED!

With the decline of federal funding for local channel dredging projects, a different approach to dredging is required!

the **CHALLENGE**

How We Got Here

- Local dredging - very limited dredging.
- Recent funding not enough
 - Virginia Port Authority's Waterways Maintenance Fund (\$1.5MM)
 - Few projects (2 to 3) annually,
 - Nowhere addressing dredging needs in region/Commonwealth.

the **SOLUTION**

The Plan

Business Model Evaluation

Middle Peninsula Local Government Dredging Implementation Plan

THE PROCESS

- Received funding from the Virginia Port Authority's Waterways Maintenance Fund to study and develop plan
- Estimated the costs of dredging 21 channels via private sector contracting
- Designed the structure of a region/locally operated dredging program
- Estimated the costs of dredging 21 channels via public dredging program
- Evaluated different methods of financing the dredging program
- Estimated the impact on local tax base
- Developed recommendations for implementing the dredging program

Note: Individual counties selected the creeks for this analysis.

the SOLUTION

The Channels

Navigation Project	Total Volume (Cubic Yards)
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GLOUCESTER COUNTY **228,373**

Aberdeen Creek	59,250
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Cedarbush Creek	89,506
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Timberneck Creek	46,300
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Combination (<i>Aberdeen, Cedarbush and Timberneck</i>)	195,056
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Sarah Creek	9,549
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Perrin River	14,593
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Combination (<i>Sarah and Perrin</i>)	24,142
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Free School Creek	222
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Whittaker Creek	8,953
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Combination (<i>Free School and Whitter</i>)	9,175
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Navigation Project	Total Volume (Cubic Yards)
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MATHEWS COUNTY **302,534**

Mill Creek 2	1,127
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Put In Creek	5,370
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Combination (Mill 2 and Put In)	6,497
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Davis Creek	32,900
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Horn Harbor	82,233
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Winter Harbor	106,861
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Combination (<i>Davis, Horn harbor and Winter Harbor</i>)	221,994
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Hole In The Wall	40,000
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Queens Creek	23,000
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Milford Haven	11,043
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Combination (<i>Queens and Milford Haven</i>)	34,043
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Navigation Project	Total Volume (Cubic Yards)
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MIDDLESEX COUNTY **66,468**

Broad Creek	7,136
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Bush Park Creek	2,568
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Mill Creek	483
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Whiting Creek	31,644
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Robinson Creek	4,372
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Parrotts Creek	20,265
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TOTAL Cubic Yards	597,395
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the SOLUTION

The Channels

DUMP TRUCK (average Dump Truck 15 cubic yards)

Gloucester = 15,000 Trucks

Mathews = 20,000 Trucks

Middlesex = 4,500 Trucks

REGION = 40,000 Trucks



X 2,000 = 40,000



the SOLUTION

Why You Should Care

21 CREEKS STUDIED		Or Do Nothing
Private Cost Model \$36 Million	Public Cost Model \$21.3 Million 29% → 42% Cost Savings	?
		?
		?
		No/Little Control

the SOLUTION

The Plan

Cost of Private Contracting of Dredging

Private Model

\$30-36 MILLION

DREDGING OF 21 CHANNELS

Gloucester	\$9.2M
Mathews	\$12.6M
Middlesex	\$8.2M

the SOLUTION

The Plan

Cost of Regional/Local Dredging Program

Public Model

**\$3.4 MILLION
ANNUALLY**

cost of equipment,
staffing, administrative
and financing costs

\$21.3 million



total cost dredging
of 21 channels

the SOLUTION

Establish a Regional Dredging Program

Public Model

29% to 42% Savings

in operating a regionally operated dredging program vs. contracting the dredging work with private contractors.

\$30.1M Private Sector
(combination projects)

\$21.3M Regional
Dredging Program Costs =

\$8.2M Savings

\$36.7M Private Sector
(individual projects)

\$21.3M Regional
Dredging Program Costs =

\$15.4M Savings

the SOLUTION

Regionally Operated Program

DREDGING COST

Real Estate Tax Inc./\$100

Gloucester	\$8.5M
Mathews	\$9.8M
Middlesex	\$3M

Countywide	Special Taxing Districts - Ave.
\$0.024	\$0.81
\$0.080	\$1.04
\$0.046	\$0.21

the SOLUTION

Establish a Regional Dredging Program

Most cost-effective course of action:

- Middle Peninsula counties purchase and operate medium-sized hydraulic cutter dredge
- Middle Peninsula Chesapeake Bay Public Access Authority (MPCBPAA) engaged as best option to implement the regional dredging program

This option:

- Saves each locality \$\$
- Is the most financially feasible option
- Produces a planned schedule of dredging projects – 3 to 4 projects/yr.

the SOLUTION

Establish a Regional Dredging Program

Operating a regional dredging program provides:

- A severe dredging problem solution,
- Flexibility in prioritize channel dredging,
- Improves economic development opportunities at working waterfronts,
- Improves resiliency of the creeks and shorelines,
- Ensures growth of waterfront property values,
- Ensures growth of real waterfront estate tax revenues.

BONUS: A pilot for financing future resiliency projects of this magnitude in rural coastal areas.

the **COST OF DOING NOTHING**

If you do nothing, local governments have no control.

**Mathews County
Land Assessments
Example**



7
**TARGETED
CHANNEL
WATERSHEDS**

**\$60,700,300
LOSS**

in Land Values
Lost Last Reassessment

Gloucester County Assessment Estimate

1 FT of water depth = **13.8% decrease** in land value



RECOMMENDATION

The Middle Peninsula counties, through the Middle Peninsula Chesapeake Bay Public Access Authority (MPPAA), purchase and operate their own medium-sized hydraulic cutter dredge to carry out dredging projects throughout the region.



This approach is the **MOST COST-EFFECTIVE** course of action for dredging the shallow draft channels in the Middle Peninsula.

ACTION STEPS



COALITION OF THE WILLING. The Middle Peninsula counties formally request the MPPAA to develop a plan for managing a regionally operated dredging program with a detailed financing plan to support the program.



HIRE LEGAL AND FINANCIAL EXPERTS. The MPPAA engage a financial advisor and bond counsel to evaluate the best finance structure for funding the dredging projects.

- Each participating county share cost equally
- Cost estimate - \$30,000



ADOPT DREDGING MANAGEMENT PLAN. The Middle Peninsula counties, based on the approval of the “regional dredging management plan/MPPAA,” adopt the appropriate resolutions providing the assurances that the local revenues will be available to cover the costs of the regionally operated dredging program.

ACTION STEPS *to Enact Recommendation*

4

VPA MULTI-YEAR FUNDING COMMITMENT. The Middle Peninsula counties encourage the Virginia Port Authority to adopt a multi-year commitment to dredging projects in the Middle Peninsula based on the “regional dredging management plan/MPAA”. Such action will help facilitate the completion of pre-dredging activities, support a comprehensive approach to dredging shallow draft channels, reduce costs and improve the coordination with other potential grant programs.

5

INTENSE WORKING WATERFRONT PLANNING. The MPPDC, in partnership with member localities, identify several working waterfront communities for intense planning that would support the development of the working waterfronts leading to grant funding supporting the working waterfront development and channel dredging.

ACTION STEPS *to Enact Recommendation*



PLAN FOR USE OF DREDGE MATERIAL. The MPPDC, in partnership with member localities, continue and expand its planning efforts to determine the eligibility for grant funding for the beneficial use of the dredge material and how the dredging program coordinates with other environmental initiatives, particularly the improvement of the Chesapeake Bay and resiliency from flooding.



PARTNER WITH USACE ON FUTURE PROJECTS. The Middle Peninsula localities should partner with the USACE, when federal funding becomes available, to expedite dredging projects and reduce costs. This includes pre-construction, construction, and post construction activities.

Navigable waterways in the Middle Peninsula are becoming clogged with sediment to the degree that commercial and recreational marine traffic can no longer safely maneuver to existing piers, docks and moorings. This is having a negative economic effect on the region and local government real estate tax revenues.



THERE IS A SOLUTION:

regionally operated dredging program



DISCUSSION



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MIDDLE PENINSULA
PLANNING DISTRICT COMMISSION